



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/661,834	06/11/96	KRONZER	J 4575116/A60

3M OFFICE OF INTELLECTUAL
PROPERTY COUNSEL
P O BOX 33427
ST PAUL MN 55133-3427

QM41/0618

EXAMINER	
LEWIS, A	
ART UNIT	PAPER NUMBER
3761	26

DATE MAILED:

06/18/99

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Office Action Summary

Application No.

08/661,834

Applicant(s)

Joseph P. Kranzer et al.

Examiner

A. J. Lewis

Group Art Unit

3761

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 4/8/99 (Amendment) and 4/26/99 (Request for CPA).
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 25-37 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 25-37 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ ☐ Interview Summary, PTO-413
- ☒ Notice of References Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

Office Action Summary

Art Unit: 3761

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 25-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of independent claims 25 and 32, "...with the proviso that if the bicomponent fiber content is 85 weight percent or greater, then the surface fuzz value exceeds 8.0." is indefinite as to exactly what applicant intends to define because the nonwoven fibrous layer in each claim is recited as containing at least about 40 weight percent thermally bonding fibers which would limit additionally components of the nonwoven fibrous layer to 60 weight percent. Thus, while bicomponent fibers might properly constitute 85 weight percent of the nonwoven fibrous layer, all other components of the nonwoven fibrous layer would be limited to 15 weight percent, an amount which is not consistent with the language of the claims that defines the nonwoven fibrous layer to have at least 40 weight percent.

As to claim 27, the manner in which independent claim 25 is amended (i.e. if bicomponent fiber content is at least 85%, then surface fuzz value exceeds 8.0) at least suggests that fuzz value is proportional to the amount of bicomponent fibers; however, claim 27 recites that the fuzz value is at least 8.0 regardless of the amount of bicomponent fibers. Accordingly, claim 27 is

Art Unit: 3761

inconsistent with the scope of independent claim 25 from which it depends directly and is indefinite as to exactly what applicant intends to be the invention.

Claims 28,31,33 and new claims 35-37 are also indefinite as to exactly what applicant intends to be the invention for the reasons set forth above with respect to claim 27.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, each of claims 25 and 32 recites the broad recitation "...at least 40 weight percent thermally bonding fibers...", "...at least 10 weight percent of the fibers in the nonwoven layer being bicomponent fibers...", "...a surface fuzz value of not less than 7.5...", and each of the claims also recites "...with the proviso that if the bicomponent fiber content is 85 weight percent or greater, then the surface fuzz value exceeds 8.0." which is the narrower statement of the range/limitation.

Art Unit: 3761

In each of claims 25 and 32, "...the nonwoven layer..." in line 6 and 5 respectively of each claim, should read --the nonwoven fibrous layer-- in order to properly refer back to the initial recitation of "...a nonwoven fibrous layer..." in line 4 and 3 respectively of each claim. Otherwise, "...the nonwoven layer..." in line 6 of claim 25 and in line 5 of claim 32 lacks antecedent basis.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 25-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dyrud et al.('619) in view of Thiebault ('682), for the reasons set forth in the office action dated 10/02/96 and in the office action dated 03/31/97.

As to claim 25, Dyrud et al.('619) disclose a fibrous face mask (figs.1-3) for filtering contaminants and/or particulate matter, which comprises: a means (12) for securing the mask to the face of a wearer; and a non-woven fibrous layer (disclosed as a shaping layer) attached to the securing means and containing at least about 40% weight thermally bonding fibers based on the weight of the fibers in the non-woven fibrous layer, at least about 10% weight of the fibers in the non-woven layer being bicomponent fibers, and optionally staple fibers, the non-woven fibrous layer being molded in a cup-shaped configuration. As for the claimed weight ratios of at least 40%

Art Unit: 3761

weight thermally bonding fibers and at least 10% weight bicomponent fibers in the non-woven layer, applicant is referred to Dyrud et al. (col.4, lines 29-37) which discloses weight ratios ranging from 0% staple fibers:100% bicomponent fibers to 75% staple fibers:25% bicomponent fibers, a range which includes the claimed values of 40% thermally bonding fibers and 10% bicomponent fibers.

The difference between Dyrud et al. and claim 25 is a fuzz value of not less than 7.5.

Thiebault teaches a fibrous face mask (fi.1) which has its fluffy layer smoothed by flattening them using a heated metal mass. The process is done in order to make the mask more comfortable to wear.

It would have been obvious to modify the surface of the mask of Dyrud et al. to flatten the fluffy fibers so that it would be more comfortable to wear as taught by Thiebault.

As for the degree of smoothness expressed as the claimed "surface fuzz value", it is submitted that it would have been obvious to smooth the fibers of Dyrud et al. to any desirable degree including one having a surface fuzz value of not less than 7.5.

As to claim 26, Dyrud et al. as discussed above disclose a wide range of weight percent of fibers making up the non-woven layers which include the claimed weight per cent of fibers. Moreover, Dyrud et al. disclose a plurality of non-woven layers having filtration layer of blown microfibers therebetween (fig.2 and col.6, line 63-col.7, line 20).

As to claims 27-31, and new claims 35-37, the particular values of weight per cent of the bicomponent fibers and the particular surface fuzz value in Dyrud et al. as modified by Thiebault

Art Unit: 3761

can be arrived at through mere routine experimentation and observation with no criticality seen in the particular values being claimed.

The balance of the claims 32-34 appear to be substantially equivalent in scope to claims 25-31 and are included in Dyrud et al. as modified by Thiebault.

As to the language added to independent claims 25 and 32 ("...with the proviso that if the bicomponent fiber content is 85 weight percent or greater, then the surface fuzz value exceeds 8.0.") and to dependent claims 27,28,31,32,33 and 35-37 ("...regardless of bicomponent fiber content."), it is reiterated that it would have been obvious to modify the surface of the mask of Dyrud et al. to flatten the fluffy fibers so that it would be more comfortable to wear as taught by Thiebault and as for the degree of smoothness expressed as the claimed "surface fuzz value", it is submitted that it would have been obvious to smooth the fibers of Dyrud et al. to any desirable degree including one having a surface fuzz value of not less than 9.5

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron J. Lewis whose telephone number is (703) 308-0716.

Aaron J. Lewis

June 4, 1999



Aaron J. Lewis
Primary Examiner